

From wang!elf.wang.com!ucsd.edu!info-hams-relay Tue Mar 19 07:09:17 1991 remote  
from tosspot  
Received: by tosspot (1.63/waf)  
via UUCP; Tue, 19 Mar 91 23:13:03 EST  
for lee  
Received: from somewhere by elf.wang.com id aa15644; Tue, 19 Mar 91 7:09:16 GMT  
Received: from ucsd.edu by news.UU.NET with SMTP  
(5.61/UUNET-shadow-mx) id AA09567; Mon, 18 Mar 91 22:19:54 -0500  
Received: by ucsd.edu; id AA18545  
sendmail 5.64/UCSD-2.1-sun  
Mon, 18 Mar 91 17:29:22 -0800 for nixbur!schroeder.pad  
Received: by ucsd.edu; id AA18528  
sendmail 5.64/UCSD-2.1-sun  
Mon, 18 Mar 91 17:29:17 -0800 for /usr/lib/sendmail -oc -odb -oQ/var/spool/  
lqueue -oi -finfo-hams-relay info-hams-list  
Message-Id: <9103190129.AA18528@ucsd.edu>  
Date: Mon, 18 Mar 91 17:29:15 PST  
From: Info-Hams Mailing List and Newsgroup <info-hams-relay@ucsd.edu>  
Reply-To: Info-Hams@ucsd.edu  
Subject: Info-Hams Digest V91 #213  
To: Info-Hams@ucsd.edu

Info-Hams Digest                      Mon, 18 Mar 91                      Volume 91 : Issue 213

Today's Topics:

Anybody out there ever fixed a microwave oven  
Aurora beacon  
DX Bulletin  
Ham Stacks Sighted!  
HR 2600  
Hypercard HamStack Articles Part 5 of 8  
Hypercard HamStack Articles Part 8 of 8  
MAJOR SOLAR FLARE ALERT - 17 MARCH - SOLAR INFORMATION UPDATE  
MAJOR SOLAR FLARE ALERT - 18 MARCH  
SOLAR TERRESTRIAL BULLETIN - WARNING UPDATES - 18 MARCH

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

-----

Date: 18 Mar 91 16:51:40 GMT  
From: dog.ee.lbl.gov!hellgate.utah.edu!csn!chuck@ucbvax.Berkeley.EDU (Chuck Luciano)  
Subject: Anybody out there ever fixed a microwave oven  
To: info-hams@ucsd.edu

There is no newsgroup that specifically suits itself to this flavor of question, so if you feel this question is out of place, please hit the 'n' key so that only one of us wastes bandwidth in an inappropriate place.

Now then, if you are still reading I have a question about microwave ovens.

Through pilot error I managed to run a microwave oven at full power for 70 minutes with nothing in it. It having nothing else to cook, cooked itself.

I have serviced a lot of electronic equipment, amplifiers, tuners, tv's, etc. but never a microwave.

There is apparently a magnetron and a power supply, the magnetron has two wires attached to it, it is a sealed unit. I have to assume that the oscillator is inside the sealed unit.

Does anybody know if the magnetron is the most likely point of failure, or is the supply? Can I use a volt meter to measure the voltage from the power supply? Should I disconnect the supply from the magnetron before measuring the supply? If I disconnect the supply, should I provide a dummy load? Any other suggestions?

The microwave is a sharp convection/microwave it is about two to three years old, I could provide an exact model if needed (I don't know it off hand).

Does sams provide photofact folders on microwaves? Does the manufacturer put service manuals in the hands of mere mortals.

I have a hard time believing that some sensible precautions, wouldn't reduce this to a fairly safe activity, but maybe you know otherwise.

Any info on this is greatly appreciated, reply by mail and I'll post a summary if there is sufficient interest, and somebody can suggest the most appropriate newsgroup for this line of discussion.

Chuck Luciano  
303-421-9113  
chuck@csn.org

Disclaimer: Don't try this at home kids, we're professionals here.

--

Wow a .sig, I never had a .sig before.

-----

Date: Mon, 18 Mar 91 08:04:04 EDT

From: Mike Owen W9IP <MROWEN%STLAWU.BITNET@CORNELLC.cit.cornell.edu>

Subject: Aurora beacon

To: hams <INFO-HAMS@UCSD.Edu>

Just a reminder for those of you who are interested in  
auroral backscatter (a.k.a. Aurora, or Buzz):

The W9IP/BCN aurora beacon is still running fine  
after 15 months on the air. It is on 144.292, CW, with  
45 watts to a 5-element yagi pointed north. Location is  
a good hilltop near Canton, NY, FN24 (far northwestern New York).

Now all we need is a big geomagnetic storm.

Mike

-----

Date: Mon, 18 Mar 91 08:17:08 EST

From: skitch@NADC.NADC.NAVY.MIL (M. Squicciarini)

Subject: DX Bulletin

To: info-hams@ucsd.edu

The Ohio/Penn Dx Packet Cluster

DX Bulletin No. 002

March 18, 1991

Provided by BARF-80 BBS Cleveland, Ohio

Online at 216-237-8208 2400/1200/300 8/N/1

Thanks to Tedd Mirgliotta, KB8NW, and the Northern Ohio Amateur Radio  
Society, Northern Ohio DX Association and NA8A, WB3LHD, WK3N, W8QWI,  
KQ8M AND K8YSE for the following DX information.

4K1, SOUTH SANDWICH??? Well 4K1ZI was up again. KC8MK reports hearing  
4K1KI on March 12 operating on 21023.6 at 0400Z. Also on March 17,  
K8QWY heard the 4K1 on 14004.6 at 0430Z. Still confusion on the true  
QTH about this one, but remember Work First Worry Later! (WFWL)

9K2, KUWAIT. It seems Alan, NE2X, continues to be active signing  
9K2/NE2X. He has been heard on the following net frequencies: 14260 and  
14160 KHz. Alan has been heard saying, " Many of the Kuwaiti operators

had there stations destroyed by Iraqi soliders." Lets hope 9K2CS's station is intact, along with the logs for 701AA operations, for those who still did not receive their QSL CARDS.

ET, ETHIOPIA. JACK, W4IBB, signing ET2A, continues to be very active on both 10 and 15 meters. The pile ups are still big, but Jack has been hanging in there. Jack seems to start the day off on 10 meters running shotgun around 1200Z on a variety of frequencies and then moves to 15 meters around 1800Z. Operations on 15 meters are mainly on a net on 21300 KHz. QSL via WB2WOW.

HP, PANAMA. Frank, HP3FL, is quite active on 3795 and 7088 KHz between 1100-1200 UTC. QSL to : Frank Linares, Box 76, David-Chiriqui, Panama.

KG4, GUANTANAMO BAY. Frank, KG4FG, is on daily after 2200Z on 14270. On weekends look for Frank on 18122 KHz starting at 1300Z. He can also be found on 21310, 3808, 3810, 3812 etc. and he often just monitors the frequency, so give him a call. QSL to Frank Santiago, Box 35B, FPO New York 09508.

ST0, SOUTHERN SUDAN. Dennis, ST0DX, is still very active. Check 21335 KHz on Snooky's Net around 2000-2200 UTC. Dennis has also been active by himself on 24955 KHz at 1344Z and 21300 KHz at 1430Z. QSL via WB2WOW.

U2MIR. The Soviet space station MIR still continues to be active on 145.550 MHz operating both packet and voice. The callsign used for Musa packet PBBS is U2MIR-1. If your lucky, you may leave Musa a message. The overhead passes are different each day, but monitor the frequency and you will hear MIR for sure. QSL to Boris Stepanov, P.O. Box 679, 107207 Moscow, USSR. Please enclose SAE plus IRC's or equivalent.

XU, KAMPUCHEA. XU8DX has become active again. There have been reports of operations on 7003 KHz at 1115Z this week and 14153 KHz at 1050Z last week. Not sure who is operating, but XU8DX is suppose to be a club station.

YA, AFGHANISTAN. N2RU has received word from RL8PYL gang that they will activate this one in late March or early April. Operations will be on a large scale and on CW-SSB-RTTY with activity on 10-160 meters. Meanwhile, word came out about the YA0RR cards may be out in late April.

ZA, ALBANIA. We have not heard from the HA group for a while on their attempts to operate from Albania. But things are getting better in ZA-land. As of March 15, the U.S will be resuming diplomatic ties with Albania after a 52 year of non-recognition. The reason for resuming ties with Albania is their first multiparty election on March 31. Let's

hope this opens the door for amateur radio again. FYFC!!!

17 AND 12 METERS. These two bands continue to be very active with variety of DX station thru out the world. Remember these bands count for DXCC credit. Look for:

4S7EA	18147/0115Z	A22AA	24967/1611Z
4X4MS	18122/2357Z	AP2JZB	24937/1400Z
5B40G	18079/0305Z	J37AJ	24949/2259Z
ES1QD	18140/2358Z	KH3AE	24938/0111Z
F00IGS	18140/0255Z	OY3QN	24896/1525Z
HZ1AB	18140/0120Z	T77C	24901/1437Z
UM8QA	18087/0309Z	VS6BG	24899/1523Z
V31KK	18158/0038Z	ZS6GG	24967/1834Z

30 METERS. Don't forget about this band. Stations heard by W3s and W8s are: 4K1A, ES1QD, F00IGS, HF0POL, HZ1AB, IS0ESG, T77C, VK6HD, ZD8LII and all heard between 2230 to 0300 UTC.

DXCC REMINDER. DXCC Honor Roll submissions and cards must be received by March 28 to qualify for the next Honor Roll Listing. As of March 15, processing had begun on endorsements received on September 19. Tim, KQ8M, had a conversation with Don Search, W3AZD, about those who still have endorsement cards at the DXCC Desk and want to send more cards in to qualify for the Honor List. Don said, "Those who have cards at the Desk, may send cards in that qualify them for the listing. Put the month and year the endorsement was sent for the line: Last Submission Date."

ANOTHER REMINDER. The 80-meter Novice band has been moved on March 16, to 3675-3725 KHZ. Also higher-class licensees should remember that their power limit in this range is also 200 watts output.

SURPRISING NOTE. Word has it that HeathKit will be getting out of Ham Radio business in June this year. They will sell off all their Ham inventory, but will supply parts for the next five years. Also there is word going around that R.L. Drake may re-enter the Ham Radio rig business.

Good Luck on DX de KB8NW

73 -- marty -- nr3z

skitch@nadc.navy.mil

-----  
Date: Mon, 18 Mar 1991 05:46:33 PST  
From: hugh\_davies.wgc1@rx.xerox.com  
Subject: Ham Stacks Sighted!

To: uokmax!skaggs@apple.com

<...I downloaded these from apple.apple.com (thanks!) but I do not have the BinHex program to decode/uncrunch them. Can anyone direct me to a version of that runnable on a Sun?...>

Even if you find a suitable version of BinHex, can I enquire as to exactly what you're going to do with a Macintosh Hypercard stack on a Sun?

73,

Hugh, G0CNR.

=====

"I wanted to be bored to death, as good a way to go as any."  
Peter de Vries (1910- ). US Novelist.

-----

Date: 18 Mar 91 23:19:37 GMT  
From: sun-barr!newstop!west!stan@decwrl.dec.com (Stan Galonski Sun DCSM El Segundo)  
Subject: HR 2600  
To: info-hams@ucsd.edu

I posted a few weeks ago asking if any of you had any Mods for the Uniden HR 2600, so far I have yet to get any reply. What I have gotten were a lot of requests to pass on any info I get. So please if you know of any e-mail and I will post a summary

Thanks  
Stan,kb6rqz

PS: The return in the header is incorrect it should be

stan@suntzu.West.Sun.COM

-----

Date: 18 Mar 91 15:46:22 GMT  
From: genrad!dls@husc6.harvard.edu (Diana L. Syriac)  
Subject: Hypercard HamStack Articles Part 5 of 8  
To: info-hams@ucsd.edu

11-Feb-91 09:34 dls Updates for NoCode changes  
BUGS to fix in HyperCard Ham Stacks

This assumes that you already have the article on how to fix bugs in my HyperCard Ham Stacks. If you don't have this, ASK for it. It gives a

general description of how to fix the most LIKELY bugs in the Ham Stacks.

This contains the following updates:

Technician Ham Stack v3.0 CHANGES to get to v3.1 - changes for NoCode license

General Ham Stack v3.0 CHANGES to get to v3.1 - changes for NoCode license

Advanced Ham Stack v3.0 CHANGES to get to v3.1 - changes for NoCode license

Extra Ham Stack v3.0 CHANGES to get to v3.1 - changes for NoCode license

<Angle brackets give an explanation of the fix>

MSG: means type the following into the message box. You can get a message box at any time by pressing Ctrl M (in HyperCard, that is).

MenuItem->Menuchoice: means choose the menu item as specified.

Before opening ham stack, pull up a message box and type:

put true into hamstacktest

Now open ham stack.

Technician Ham Stack v3.0 CHANGES to get to v3.1:

-----

<The next change remove a question for the NoCode modification. Due to the method I use to randomly generate tests, I need to keep the same number of questions.....so I simply copy a valid question to use for the deleted question. Eventually, I expect the deleted questions will be REPLACED by equivalent valid NoCode questions. For now, this will prevent the questions from being accessed.>

1.
  - a. MSG: go card "#3" <remove card 3AA-2.1>
  - b. Edit->Delete Card
  - c. Edit->Copy Card <copies card #4>
  - d. Edit->Paste Card
  - e. Go->Prev <goes to DUPLICATE card #4>
  - f. Objects->Card Info
  - g. Change card name from "#4" to "#3" <this is card number 5>
  - h. Click OK
2.
  - a. Go->First <minor fix in scripts>
  - b. Objects->Card Info, Click Script
  - c. Delete "immediate," from second line (which starts "global")
  - d. Cut third line: "put true into immediate"
  - e. Click OK
  - f. Objects->Stack Info, Click Script
  - g. Add ", immediate" to end of second line (which starts "global")
  - h. Paste a new third line: "put true into immediate"

- i. Click OK
- j. Hold down Option & Control and click on "Exam" button to get to its script.
- k. Change all occurrences of "card id 11003" to "card report" (there may be one or two), change "field id 6" to "field QMissed", click OK.

<change version>

- 3. a. Go to help card (click the ? button on first card)
- b. Change first line from "Version 3.0 1-Nov-90" to "Version 3.1 5-Feb-91"
- c. Change second paragraph from "July 1, 1990 until October 31, 1992" to "February 14, 1991 until October 3, 1992 (includes NoCode changes)"

< You may also want to change the Version number specified in the Info: Exit HyperCard, Click on Technician Ham Test, File->Get Info, Change "3.0" to "3.1". >

- d. Click Compact Stack button, Update COMPLETE!

General Ham Stack v2.0 CHANGES to get to v2.1:

-----

<There are no question changes for the General Ham Stack for NoCode>

- 1. a. Repeat Technician step 2 above to fix minor error in script.

<change version>

- 3. a. Go to help card (click the ? button on first card)
- b. Change first line from "Version 2.0 1-Nov-90" to "Version 2.1 9-Feb-91"
- c. Change second paragraph from "July 1, 1990 until October 31, 1992" to "February 14, 1991 until October 3, 1992 (includes NoCode changes)"

< You may also want to change the Version number specified in the Info: Exit HyperCard, Click on General Ham Test, File->Get Info, Change "2.0" to "2.1". >

- d. Click Compact Stack button, Update COMPLETE!

Advanced Ham Stack v2.0 CHANGES to get to v2.1:

-----

<There are no question changes for the General Ham Stack for NoCode>

- 1. a. Repeat Technician step 2 above to fix minor error in script.
- 2. a. Repeat General step 2 above to update version, except replace "General" with "Advanced" in the steps.



Extra Ham Stack v2.0 CHANGES to get to v2.1:

-----

<The next change remove a question for the NoCode modification. Due to the method I use to randomly generate tests, I need to keep the same number of questions.....so I simply copy a valid question to use for the deleted question. Eventually, I expect the deleted questions will be REPLACED by equivalent valid NoCode questions. For now, this will prevent the questions from being accessed.>

1. a. MSG: go card "#93" <remove card 4BA-7B.4>  
b. Objects->Card Info, uncheck "Don't Delete Card" box, click OK.  
c. Edit->Delete Card  
d. Edit->Copy Card <copies card #94>  
e. Edit->Paste Card  
f. Go->Prev <goes to DUPLICATE card #94>  
g. Objects->Card Info  
h. Change card name from "#94" to "#93" <this is card number 95>  
i. Click OK
2. a. MSG: go card "#95" <remove card 4BA-7C.2>  
b. Objects->Card Info, uncheck "Don't Delete Card" box, click OK.  
c. Edit->Delete Card  
d. Edit->Copy Card <copies card #96>  
e. Edit->Paste Card  
f. Go->Prev <goes to DUPLICATE card #96>  
g. Objects->Card Info  
h. Change card name from "#96" to "#95" <this is card number 97>  
i. Click OK
3. a. Repeat Technician step 2 above to fix minor error in script.
4. a. Repeat General step 2 above to update version, except replace "General" with "Extra" in the steps.

->Diana L. Syriac dls@genrad.com Ham: KC1SP (Sweet Pea) <-  
->I'D RATHER BE FLYING! P-ASEL, INST CAP: 1LT, Freedom 690 Mobile<-  
->GenRad AD ASTRA, PER ASPERA <-  
->MS/6, 300 Baker Ave, Concord, Mass. 01742 (508) 369-4400 x2459 <-

-----

Date: 18 Mar 91 15:48:51 GMT  
From: genrad!dls@husc6.harvard.edu (Diana L. Syriac)  
Subject: Hypercard HamStack Articles Part 8 of 8

To: info-hams@ucsd.edu

18-Mar-91 08:31 dls Create for Tech v3.4

BUGS to fix in HyperCard Ham Stacks

This assumes that you already have the article on how to fix bugs in my HyperCard Ham Stacks. If you don't have this, ASK for it. It gives a general description of how to fix the most LIKELY bugs in the Ham Stacks.

This contains the following updates:

Technician Ham Stack v3.3 CHANGES to get to v3.4 - fixes bugs  
found by rick furuta@cs.umd.edu THANKS!

<Angle brackets give an explanation of the fix>

MSG: means type the following into the message box. You can get a message box at any time by pressing Ctrl M (in HyperCard, that is).

Menuitem->Menuchoice: means choose the menu item as specified.

WDEF Virus

-----

NOTE that Rick Furuta informed me that there was a WDEF virus on the diskettes that I've been sending out. I don't know how it got there, but he did tell me that it is easy to remove the virus: Before putting the diskette into the drive, hold down the Option and Cloverleaf buttons. Now (while holding down the buttons) install the diskette. The Mac asks you if you want to rebuild the directory structure. Answer YES. It takes only about 10 seconds to fix the diskette.

He also suggests (just to be on the safe side) that you also rebuild the directory structure of the hard drive (if you have one). Use the same procedure: Hold Option and Cloverleaf buttons while rebooting the disk. The Mac asks you if you want to rebuild the directory structure. Answer YES. It takes around 30 seconds to rebuild a full hard disk. The latest diskettes that I'm sending out (with Tech v3.4) have fixed this. Any previous diskettes are suspect and should be fixed.

NOTE that some "Virus Detectors" PREVENT you from fixing the diskette, they simply eject the diskette. To fix it, you will have to remove the "Virus Detector" temporarily, fix the diskette as described above, then reinstall the "Virus Detector" and the diskette can then be verified and installed correctly.

Thank you, Rick Furuta, for finding and helping me resolve this problem!

Technician Ham Stack v3.3 CHANGES to get to v3.4:

-----

Before opening ham stacks, pull up a message box and type:

put true into hamstacktest

Now open Technician stack.

1. a. MSG: find "3AA-7-2.2" <typo in question 3AA-7-2.2>  
b. Tools->Field (upper right icon)  
c. Click on answer C text  
d. Objects->Field Info, uncheck "Lock Text", click OK  
e. Tools->Browse (upper left icon)  
f. Change answer C to read:  
The FCC rules do not specify a maximum frequency shift above 50 MHz.  
g. Repeat steps b and c above  
h. Objects->Field Info, check "Lock Text", click ok  
i. Tools->Browse (upper left icon)
2. a. MSG: find "3AH-2-5.2" <reverse answers in 3AH-2.5.2>  
b. Following similar directions to steps 1b-1i above, change answer B to read:  
The type of information to be transmitted.  
c. Following similar directions to steps 1b-1i above, change answer D to read:  
The type of modulation of the main carrier.
3. a. MSG: find "3AH-7-1.1" <typo on question 3AH-7-1.1>  
b. Following similar directions to steps 1b-1i above, change question.  
Replace "F3E" with "FM", all else in the question remains the same.

<The next two steps create an immediate feedback box similar to the one used in the Novice stack. A few people have commented that they like it better than the one currently being used in the Technician stack.>

4. a. Option-Control-B to get to background<add new bg field review>  
(alternately, one of the menus has a Background menuitem which does the same thing)  
b. Objects->New Field  
c. Double click on the newly created field (or Objects->Field Info does the same thing)  
d. Set Field name to "review", click shadow for style, click "Lock Text", click OK  
e. MSG: set the rect of bg field review to 339,119,498,137  
f. MSG: set the textStyle of bg field review to bold
5. a. Objects->Background Info, click Script <modify on reView script>  
b. Add a new third line to script "on openCard". Here's the new third line:  
hide field review  
c. scroll down to script "on reView" and change it so that it looks like

this instead: (changed lines denoted by <<<)

on reView

global rightone, immediate

put "Correct answer is " & rightone into field review

<<<

if not immediate then

wait 3 seconds

show field review

<<<

wait until the mouseClicked

<<<

else

if hilite of background button rightone is false then

show field review

<<<

wait until the mouseClicked

<<<

else

-- show background button "Correct!"

end if

end if

end reView

d. Click OK

6. a. MSG: go card report <add a stopwatch cursor>  
b. Option-Control-C to get to card script (or Objects->Card Info, then click Script to do the same thing)  
c. Add a new line immediately after the "globals" line in script "on openCard":  
set cursor to 4  
d. Click OK
7. a. Go to help card (Go->First, then click ?) <change version>  
b. Change first line from "3.3 24-Feb-91" to "3.4 16-Mar-91"  
c. Click "Compact Stack"  
d. MSG: put false into hamstacktest  
e. go to Home stack by clicking on any house, UPDATE COMPLETE!

< You may also want to change the Version number specified in the Info: Exit HyperCard, Click on Technician Ham Test, File->Get Info, Change "3.3" to "3.4". >

->Diana L. Syriac dls@genrad.com Ham: KC1SP (Sweet Pea) <-  
->I'D RATHER BE FLYING! P-ASEL, INST CAP: 1LT, Freedom 690 Mobile<-  
->GenRad AD ASTRA, PER ASPERA <-  
->MS/6, 300 Baker Ave, Concord, Mass. 01742 (508) 369-4400 x2459 <-

-----

Date: Mon, 18 Mar 1991 02:59:42 -0500

From: oler@HG.Uleth.CA (CARY OLER)  
Subject: MAJOR SOLAR FLARE ALERT - 17 MARCH - SOLAR INFORMATION UPDATE  
To: info-hams@ucsd.edu

-- MAJOR SOLAR FLARE ALERT --

MARCH 17, 1991

Flare Event Summary  
Potential Impact Assessment

-----

MAJOR ENERGETIC EVENT SUMMARY

A very short, impulsive class X1.0/2B Tenflare erupted from Region 6545 beginning at 21:23 UT. The event peaked at 21:25 UT and ended at 21:31 UT on 17 March. The flare was associated with a 710 s.f.u. tenflare and a 245 MHz burst of 5,400 s.f.u.. No sweeps were associated with this event. The flare was located at S10W13. This major category x-ray flare is characteristic of the short duration events which have originated from this region over the past week. However, this event can be considered rather insignificant considering the low integrated x-ray flux achieved.

POTENTIAL TERRESTRIAL IMPACT ASSESSMENT

No terrestrial impacts are expected from this latest major flare. It was very brief and fairly insignificant, despite the x-ray rating achieved.

Major flaring is expected to continue, although probably at a reduced rate from Region 6545. Another major event is expected within the next 72 hours from this Region. Some simplification and decay in magnetic complexity has been observed in this region. However, it is still maintaining a delta configuration (although it is now fairly weak) and is still quite capable of producing a major energetic event.

New Region 6555 (S22E76) has shown impressive M-class flare activity since it arrived on the east limb. It has been responsible for five minor M-class flares on 17 March and continues to produce frequent M-class flaring. Several of these flares have been rated 2B optical types. Most of them have lasted average durations of between 20 and 40 minutes. This region is still too near the east limb to observe in any detail. Some impressive surging has also been observed on the east limb recently.

A sudden magnetic impulse was observed at many middle latitude magnetic observatories. A local SI was not seen, although Boulder reports a SI measuring 12 gammas at 20:36 UT on 17 March. This impulse is believed to be in response to the major flare at 00:52 UT on 16 March. Geomagnetic activity has increased to generally unsettled levels since about 02:30 UT on 18 March. Activity could reach minor storm levels over high latitudes, although middle latitudes should remain generally unsettled to active.

A POTENTIAL SATELLITE PROTON EVENT WARNING continues in progress. Satellite protons remain enhanced slightly above background levels. A major energetic flare could still easily push protons above event thresholds.

A POTENTIAL PCA ACTIVITY WARNING also continues in progress and will likely remain in effect for the next 48 to 72 hours.

Frequent minor SID's/SWF's can be expected due to the number of M-class flares occurring from Region 6555. SID's/SWF's should be fairly minor and of relatively short duration, unless another major flare erupts from Region 6545 (which is still very possible, if not likely).

\*\* End of Alert \*\*

-----  
Date: Mon, 18 Mar 1991 13:59:34 -0500  
From: oler@HG.Uleth.CA (CARY OLER)  
Subject: MAJOR SOLAR FLARE ALERT - 18 MARCH  
To: info-hams@ucsd.edu

-- MAJOR SOLAR FLARE ALERT --

MARCH 18, 1991

Flare Event Summary  
Potential Impact Assessment

-----

#### MAJOR ENERGETIC EVENT SUMMARY

A major solar flare began at 17:03 UT, peaked at 17:34 UT and ended at 17:49 UT on 18 March. The flare, located at S10W24, was rated a class M5.2/1B and originated from Region 6545. This is the longest duration

flare from this region in quite some time. Region 6545 is showing signs of decay in both spot complexity and magnetic complexity, although it is still quite capable of producing major flaring.

#### POTENTIAL TERRESTRIAL IMPACT ASSESSMENT

This latest event is not expected to produce a terrestrial impact. No protons are expected from this event. This event was not associated with any Type II or IV sweeps and was relatively small in optical size.

Another major flare could occur within Region 6545 over the next 24 to 72 hours. The Potential Satellite Proton Event Warning and the Potential PCA Activity Warning remain in effect.

Major flaring may also be possible from Region 6555, which appears to be a fairly complex spot group. More will be known as this region continues to rotate into better view from the east limb.

\*\* End of Alert \*\*

-----  
Date: Mon, 18 Mar 1991 03:05:50 -0500  
From: oler@HG.Uleth.CA (CARY OLER)  
Subject: SOLAR TERRESTRIAL BULLETIN - WARNING UPDATES - 18 MARCH  
To: info-hams@ucsd.edu

/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\

#### SOLAR TERRESTRIAL BULLETIN

18 March, 1991

Terrestrial Geophysical Warning Updates

/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\

#### UPDATED WARNING INFORMATION

A sudden magnetic impulse was observed at many middle latitude magnetic observatories on 17 March. The SI was not observed locally, although Boulder and several other lower latitude stations reported a SI measuring 12 gammas at 20:36 UT. The cause of this impulse is believed to be the major flare which occurred at 00:52 UT on 16 March.

Geomagnetic activity has been generally quiet to unsettled since the impulse, although it has increased very slightly since about 02:30 UT on 18 March. Predictions call for possible minor storming over high latitudes, while middle latitudes should remain generally unsettled to active. No storming is expected for the middle latitudes.

The POTENTIAL GEOMAGNETIC STORM WARNING has been cancelled for the middle latitudes. No magnetic storming is expected in conjunction with the major flare of 16 March.

The warnings currently in progress follow:

- POTENTIAL MAJOR SOLAR FLARE WARNING
- POTENTIAL SATELLITE PROTON EVENT WARNING
- POTENTIAL PCA ACTIVITY WARNING

HF and VHF propagation should be normal to above normal over middle and low latitudes. A slight degradation in middle and high latitude signal paths may be noticed on 18 March associated with the enhanced geomagnetic activity. However, no significant degradation is expected. HF MUF's should remain near 44 to 55 MHz (depending on location). Openings on 6 meters remain possible. A potential also exists for SID (Sudden Ionospheric Disturbance) enhanced VHF communications. The frequent number of M-class flares and the potential for a major flare may provide conditions favorable for SID-induced enhancements on VHF. On the other hand, HF operators will notice potentially frequent minor SWF's (Short Wave Fades) during the daylight hours.

\*\* End of Bulletin \*\*

-----

End of Info-Hams Digest

\*\*\*\*\*